

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROGER PATRICK BRUNNER

Appeal No. 2004-1244
Application 10/085,280

HEARD: August 17, 2004

Before COHEN, FRANKFORT, and MCQUADE, Administrative Patent Judges.

MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Roger Patrick Brunner originally took this appeal from the final rejection (Paper No. 7) of claims 1 through 12, all of the claims pending in the application. Upon consideration of the appellant's main brief (Paper No. 12), the examiner issued an Office action (Paper No. 14) reopening prosecution and entering a superseding rejection of the claims. Pursuant to 37 CFR § 1.193(b)(2)(ii), the appellant then filed a supplemental brief (Paper No. 16) and requested that the appeal be reinstated.

Implicitly granting the request, the examiner entered an answer (Paper No. 17), noted a reply brief (Paper No. 19) filed by the appellant and forwarded the application to this Board for review of the new rejection of claims 1 through 12.

THE INVENTION

The invention relates to auger-type ice making machines typically used in commercial settings to produce flaked or chipped ice. Representative claims 1 and 4 read as follows:

1. An ice making apparatus comprising:
 - (a) a generally cylindrical and hollow freezing chamber;
 - (b) a compacting head at an end of said freezing chamber;
 - (c) a rotatable ice auger sized to fit into said freezing chamber whereby said auger scrapes ice formed on the walls of said chamber and conveys the ice toward a discharge end of said auger and said compacting head;
 - (d) an evaporator comprising an evaporator body and a jacket;
 - (e) the evaporator body having a continuous generally spiral groove on its outer cylindrical surface, terminating in a radial outward edge; with the evaporator having a refrigerant inlet and refrigerant outlet;
 - (f) the evaporator jacket being telescopically disposed over the spiral groove of the evaporator body and being in interference fit against the outward edge of the spiral groove, sealingly engaging the evaporator jacket against the evaporator body, whereby refrigerant entering into the groove is sealingly trapped therein between a refrigerant inlet and a refrigerant outlet.
4. The apparatus of claim 1, wherein the spiral groove comprises a helical groove.

Appeal No. 2004-1244
Application 10/085,280

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

Beusch	3,910,060	Oct. 7, 1975
Kaiser et al. (Kaiser)	5,419,150	May 30, 1995

THE REJECTION

Claims 1 through 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Beusch in view of Kaiser.

Attention is directed to the briefs and to the superseding Office action and answer for the respective positions of the appellant and the examiner regarding the merits of this rejection.

DISCUSSION

I. Grouping of claims

For purposes of this appeal, the appellant groups claims 1 through 3, 5 through 9, 11 and 12 as standing or falling together and claims 4 and 10 as standing or falling together. In accordance with this grouping, and pursuant to 37 CFR § 1.192(c)(7), we will decide the appeal on the basis of claims 1 and 4 alone. Claims 2, 3, 5 through 9, 11 and 12 shall stand or fall with claim 1 and claim 10 shall stand or fall with claim 4.

II. The merits

Beusch, the examiner's primary reference, discloses an ice making apparatus for producing granular ice. As shown in Figure 1, the apparatus includes an extruder screw 1, a cooling jacket inner wall member 6, a cooling jacket outer housing wall 7, a space 13 between the member 6 and the wall 7 for receiving a cooling medium, a cooling medium inlet port 8, a cooling medium outlet port 9, and an annular extrusion plate 20 containing a plurality of conical apertures 22. In use, water is fed into the bottom of the cooling jacket, advanced upwardly by the extruder screw, formed into ice/slush on the cold inner surface of the cooling jacket, scraped off the inner surface by the screw and advanced toward and through the conical apertures in the extrusion plate.

The Beusch ice making apparatus meets all of the limitations in representative claims 1 and 4 except for those requiring (1) the evaporator body to have a continuous generally spiral groove on its outer cylindrical surface terminating in a radial outward edge (claim 1), (2) the evaporator jacket to be in interference fit against the outward edge of the spiral groove sealingly engaging the evaporator jacket against the evaporator body whereby refrigerant entering into the groove is sealingly trapped

therein (claim 1), and (3) the spiral groove to comprise a helical groove (claim 4). In this regard, Beusch does not teach that the cooling jacket inner wall member 6, which effectively constitutes an evaporator body, has a spiral or helical groove on its outer cylindrical surface, or that the cooling jacket outer housing wall 7, which effectively constitutes an evaporator jacket, is in interference fit with any part of the evaporator body.

Kaiser discloses a soft-serve frozen dessert machine 10 which is similar to the ice making apparatus disclosed by Beusch in that it includes a cylindrical freezing chamber 32 for receiving and freezing on its inner surface a liquid dessert mix and a rotating dasher 132 within the freezing chamber for scraping the frozen dessert from the inner surface and advancing it toward a dispensing means. Of particular interest is the construction of the freezing chamber:

[t]he freezer 32 is made up of a member 84, which has a substantially cylindrical inner surface 86 and a spiral groove in its outer surface 88. The member 84 is preferably cast, although it could be machined or made by other known methods. A tube 89 is shrunk over the outer surface 88 of the member 84 to create a spiral passageway for the refrigerant. This is accomplished by first heating the tube 89 so that it expands and then slipping the expanded tube over the member 84 from back to front until it reaches the front flange 91 of the casting 84. Then, when the tube 89 cools, it shrinks around the casting 84 so that the refrigerant

cannot slip through any space between the tube 89 and the casting 84 and must follow the spiral path 88 [column 6, lines 41 through 55].

According to Kaiser, the foregoing freezer construction is advantageous in terms of cost and efficiency:

[t]he refrigerant enters the freezer 32 at the refrigerant inlet 90, at the back of the freezer 32, passes through the spiral passageway 88, and leaves through the refrigerant outlet 92, near the front of the freezer 32. This arrangement minimizes the expense in making the freezer and provides for good heat transfer from the refrigerant to the product (avoiding problems of gaps between the coil which holds the refrigerant and the body of the freezer which are common in prior art designs), thereby improving the efficiency of the present evaporator over prior art evaporators [column 7, lines 6 through 16].

Kaiser's description of these cost and efficiency benefits would have provided the artisan with ample suggestion or motivation to utilize the particular freezer construction disclosed by Kaiser in place of the cooling jacket disclosed by Beusch. The appellant's contention that this would "drastically modify Beusch's intended operation" (reply brief, page 3) has no basis in the fair teachings of either reference. As so modified in view of Kaiser, the Beusch ice making apparatus would meet all of the limitations in claims 1 and 4.

Hence, the combined teachings of Beusch and Kaiser justify a conclusion that the differences between the subject matter recited in claims 1 and 4 and the prior art are such that the

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. Therefore, we shall sustain the standing 35 U.S.C. § 103(a) rejection of claims 1 and 4, and claims 2, 3 and 5 through 12 which stand or fall therewith, as being unpatentable over Beusch in view of Kaiser. As our rationale differs from that advanced by the examiner in the explanation of the rejection set forth in the superseding Office action (Paper No. 14), we designate our decision as a new ground of rejection under 37 CFR § 1.196(b) to afford the appellant a fair opportunity to react thereto.¹

SUMMARY

The decision of the examiner to reject claims 1 through 12 is affirmed, with the affirmance designated as a new ground of rejection under 37 CFR § 1.196(b).

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR

¹ In the event of further prosecution, "grove" should be changed to --groove-- in clause (e) of claim 7 and "groove" should be changed to --grooves-- in claims 2 and 8 for consistency with the rest of these claims, the somewhat confusing wording in claim 9 should be clarified and the dependency of method claim 12 should be changed from apparatus claim 6 to one of method claims 7 through 11.

Appeal No. 2004-1244
Application 10/085,280

§ 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

Appeal No. 2004-1244
Application 10/085,280

AFFIRMED; 37 CFR § 1.196(b).

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	APPEALS AND
CHARLES E. FRANKFORT)	
Administrative Patent Judge)	INTERFERENCES
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JOHN P. MCQUADE)	
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Appeal No. 2004-1244
Application 10/085,280

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